

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Mixture  
 Product name : Custom C9-C18 Hydrocarbon Blend  
 Product code : AL0-130040  
 Product group : Trade product

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### 1.2.1. Relevant identified uses

Main use category : Laboratory Use  
 Industrial/Professional use spec : Industrial  
 For professional use only

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Phenova  
 6390 Joyce Dr. Suite 100  
 80403 Golden, CO - United States  
 T 1-866-942-2978 - F 1-866-283-0269  
[info@phenova.com](mailto:info@phenova.com) - [www.phenova.com](http://www.phenova.com)

#### 1.4. Emergency telephone number

Emergency number : ChemTel Assistance (US/Canada) 1-800-255-3924  
 ChemTel Assistance (International) +1 813-248-0585

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 3 H226  
 Acute Tox. 4 (Inhalation) H332  
 Skin Irrit. 2 H315  
 Eye Irrit. 2 H319  
 Aquatic Chronic 2 H411

##### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

Xn; R20  
 Xi; R36/38  
 N; R51/53  
 R10

Full text of R-phrases: see section 16

##### Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

##### Labeling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

GHS07

GHS09

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H226 - Flammable liquid and vapor  
 H315 - Causes skin irritation  
 H319 - Causes serious eye irritation

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Precautionary statements (CLP) : H332 - Harmful if inhaled  
H411 - Toxic to aquatic life with long lasting effects  
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P233 - Keep container tightly closed  
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
P271 - Use only outdoors or in a well-ventilated area  
P273 - Avoid release to the environment  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P308+P313 - IF exposed or concerned: Get medical advice/attention  
P362+P364 - Take off contaminated clothing and wash it before reuse  
P391 - Collect spillage  
P403+P235 - Store in a well-ventilated place. Keep cool

No labeling applicable

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
n-nonane (Component)	(CAS No) 111-84-2 (EC no) 203-913-4	50	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
decane (Component)	(CAS No) 124-18-5 (EC no) 204-686-4	10	Flam. Liq. 3, H226 Asp. Tox. 1, H304
tetradecane (Component)	(CAS No) 629-59-4 (EC no) 211-096-0	5	Asp. Tox. 1, H304 Aquatic Acute 1, H400
n-dodecane (Component)	(CAS No) 112-40-3 (EC no) 203-967-9	5	Asp. Tox. 1, H304
undecane (Component)	(CAS No) 1120-21-4 (EC no) 214-300-6	5	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Asp. Tox. 1, H304
tridecane (Component)	(CAS No) 629-50-5 (EC no) 211-093-4	5	Eye Irrit. 2, H319 Skin Irrit. 2, H315
hexadecane (Component)	(CAS No) 544-76-3 (EC no) 208-878-9	5	Skin Irrit. 2, H315 Eye Irrit. 2, H319
octadecane (Component)	(CAS No) 593-45-3 (EC no) 209-790-3	5	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335
n-pentadecane (Component)	(CAS No) 629-62-9 (EC no) 211-098-1	5	Asp. Tox. 1, H304
n-heptadecane (Component)	(CAS No) 629-78-7 (EC no) 211-108-4	5	Asp. Tox. 1, H304 Aquatic Chronic 4, H413

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.

First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash with plenty of soap and water. Wash contaminated clothing before reuse.

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

### 4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries after skin contact : Causes skin irritation.

### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

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### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Use extinguishing media appropriate for surrounding fire.  
Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Flammable liquid and vapor.  
Explosion hazard : May form flammable/explosive vapor-air mixture.

#### 5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.  
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.  
Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Take up in absorbent material. Collect spillage.

#### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.  
Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No open flames. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools.  
Hygiene measures : Gently wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.

#### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment.  
Storage conditions : Keep container tightly closed. Keep container tightly closed and in a well-ventilated place. Keep away from any flames or sparking source.  
Incompatible materials : Direct sunlight. Heat sources.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

- Appropriate engineering controls : Either local exhaust or general room ventilation is usually required.  
Personal protective equipment : Avoid all unnecessary exposure. Gloves. Protective clothing. Protective goggles. Safety glasses.



- Hand protection : Wear chemically resistant protective gloves. Wear suitable gloves resistant to chemical penetration.  
Eye protection : Chemical goggles or safety glasses. Safety glasses.

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Skin and body protection	: Wear suitable protective clothing. Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact.
Respiratory protection	: Wear appropriate mask.
Other information	: Do not eat, drink or smoke during use.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Colorless.
Odor	: characteristic.
pH	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable liquid and vapor
Relative density	: No data available
Solubility	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
Explosion limits	: No data available

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

No additional information available

#### 10.2. Chemical stability

Flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

#### 10.5. Incompatible materials

No additional information available

#### 10.6. Hazardous decomposition products

May release flammable gases.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

Acute toxicity : Inhalation: Harmful if inhaled.

Custom C9-C18 Hydrocarbon Blend	
ATE CLP (gases)	4500.000 ppmV/4h
ATE CLP (vapors)	11.000 mg/l/4h
ATE CLP (dust, mist)	1.500 mg/l/4h
n-nonane (111-84-2)	
LD50 oral rat	> 15000 mg/kg (Rat; Literature)
LC50 inhalation rat (mg/l)	17 mg/l/4h (Rat; Literature)
LC50 inhalation rat (ppm)	3200 ppm/4h (Rat; Literature)
ATE CLP (gases)	3200.000 ppmV/4h
ATE CLP (vapors)	17.000 mg/l/4h
ATE CLP (dust, mist)	1.500 mg/l/4h
decane (124-18-5)	
LD50 oral rat	> 5000 mg/kg (Rat)
LD50 dermal rat	> 2000 mg/kg (Rat)

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<b>undecane (1120-21-4)</b>	
LD50 oral rat	5000 mg/kg (Rat)
ATE CLP (oral)	5000.000 mg/kg body weight
<b>n-dodecane (112-40-3)</b>	
LD50 oral rat	> 5000 mg/kg (Rat)
LD50 dermal rabbit	> 2000 mg/kg (Rabbit)
<b>tetradecane (629-59-4)</b>	
LD50 oral rat	> 15000 mg/kg body weight (Rat; Equivalent or similar to OECD 423; Experimental value)
LD50 dermal rabbit	> 5000 (Rabbit; Experimental value; Equivalent or similar to OECD 402)
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation. Based on available data, the classification criteria are not met
Respiratory or skin sensitization	: Not classified Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified Based on available data, the classification criteria are not met May cause cancer
Reproductive toxicity	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (single exposure)	: Not classified Based on available data, the classification criteria are not met
Specific target organ toxicity (repeated exposure)	: Not classified Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified Based on available data, the classification criteria are not met
Potential Adverse human health effects and symptoms	: Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - water : Toxic to aquatic life with long lasting effects.

<b>n-nonane (111-84-2)</b>	
LC50 fish 2	1 - 10 mg/l (LC50; 96 h; Pisces)
<b>decane (124-18-5)</b>	
EC50 Daphnia 1	18 mg/l (LC50; 48 h)
Threshold limit algae 1	0.05 mg/l (EC0; 72 h)
<b>undecane (1120-21-4)</b>	
LC50 fish 1	> 1000 mg/l (LC50; 96 h)
LC50 other aquatic organisms 1	> 1000 mg/l (96 h)
<b>tetradecane (629-59-4)</b>	
LC50 fish 1	> 1000 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Oncorhynchus mykiss; Semi-static system; Fresh water; Experimental value)
EC50 Daphnia 1	0.2 mg/l (EC50; Other; 48 h; Daphnia magna; Static system; Fresh water; Experimental value)
<b>n-pentadecane (629-62-9)</b>	
LC50 fish 1	1900 mg/l (LC50; 48 h)
<b>hexadecane (544-76-3)</b>	
LC50 fish 1	1600 mg/l (LC50; 48 h)
<b>n-heptadecane (629-78-7)</b>	
LC50 fish 1	> 1000 mg/l (LC50; 96 h)

### 12.2. Persistence and degradability

<b>Custom C9-C18 Hydrocarbon Blend</b>	
Persistence and degradability	May cause long-term adverse effects in the environment.
<b>n-nonane (111-84-2)</b>	
Persistence and degradability	Forming sediments in water. Biodegradable in the soil. Adsorbs into the soil.

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<b>n-nonane (111-84-2)</b>	
BOD (% of ThOD)	1.1 (1 days)
<b>decane (124-18-5)</b>	
Persistence and degradability	Readily biodegradable in water. Adsorbs into the soil. Photodegradation in the air.
<b>undecane (1120-21-4)</b>	
Persistence and degradability	Readily biodegradable in water. Forming sediments in water. Biodegradable in the soil. Adsorbs into the soil.
<b>n-dodecane (112-40-3)</b>	
Persistence and degradability	Biodegradable in water. Adsorbs into the soil.
<b>tridecane (629-50-5)</b>	
Persistence and degradability	Biodegradability in water: no data available.
<b>tetradecane (629-59-4)</b>	
Persistence and degradability	Readily biodegradable in water. Forming sediments in water. Low potential for mobility in soil. Adsorbs into the soil. Photodegradation in the air.
<b>n-pentadecane (629-62-9)</b>	
Persistence and degradability	Readily biodegradable in water. Forming sediments in water. Adsorbs into the soil.
<b>hexadecane (544-76-3)</b>	
Persistence and degradability	Readily biodegradable in water. Forming sediments in water. Biodegradable in the soil. Adsorbs into the soil. Photodegradation in the air.
ThOD	3.46 g O /g substance
<b>n-heptadecane (629-78-7)</b>	
Persistence and degradability	Not readily biodegradable in water.
<b>octadecane (593-45-3)</b>	
Persistence and degradability	Not readily biodegradable in water. Biodegradable in the soil.
BOD (% of ThOD)	0.032 (1 days; Literature study)
<b>12.3. Bioaccumulative potential</b>	
<b>Custom C9-C18 Hydrocarbon Blend</b>	
Bioaccumulative potential	Not established.
<b>n-nonane (111-84-2)</b>	
BCF fish 1	8118 (BCF)
Log Pow	5.65 (Experimental value)
Bioaccumulative potential	Bioaccumable.
<b>decane (124-18-5)</b>	
Log Pow	5.1 (Experimental value)
Bioaccumulative potential	Bioaccumable.
<b>undecane (1120-21-4)</b>	
BCF fish 1	0.0003 (BCF)
Log Pow	6.5 (Estimated value)
Bioaccumulative potential	Bioaccumable.
<b>n-dodecane (112-40-3)</b>	
BCF fish 1	50 (BCF; 72 h)
BCF other aquatic organisms 1	6250 (BCF; 24 h)
Log Pow	6.8
Bioaccumulative potential	High potential for bioaccumulation (BCF > 5000).
<b>tridecane (629-50-5)</b>	
Bioaccumulative potential	No bioaccumulation data available.
<b>tetradecane (629-59-4)</b>	
Log Pow	7.2 (Experimental value; 8.11; Calculated; Other; 25 °C)
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).
<b>n-pentadecane (629-62-9)</b>	
BCF fish 1	6.8 - 20.4 (BCF)
Log Pow	7.32 - 8.8
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).
<b>hexadecane (544-76-3)</b>	
BCF fish 1	5.0 - 47.9 (BCF)
BCF fish 2	5.6 (BCF; 168 h; Salmo salar)
Log Pow	8.25 (Estimated value)

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<b>hexadecane (544-76-3)</b>	
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).
<b>n-heptadecane (629-78-7)</b>	
Log Pow	8.69 (Estimated value)
Bioaccumulative potential	Not bioaccumulative.
<b>octadecane (593-45-3)</b>	
Log Pow	8.7 - 10 (Calculated)
Bioaccumulative potential	Not bioaccumulative.

### 12.4. Mobility in soil

<b>decane (124-18-5)</b>	
Surface tension	0.023 N/m (25 °C)
<b>tetradecane (629-59-4)</b>	
Log Koc	log Koc,Other; 5.88; QSAR

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

Additional information : Avoid release to the environment

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.  
Additional information : Handle empty containers with care because residual vapors are flammable.  
Ecology - waste materials : Avoid release to the environment.

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

### 14.1. UN number

UN-No. (ADR) : 1993  
UN-No.(IATA) : 1993  
UN-No. (IMDG) : 1993  
UN-No.(ADN) : 1993

### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : FLAMMABLE LIQUID, N.O.S.  
Proper Shipping Name (IATA) : Flammable liquid, n.o.s.  
Proper Shipping Name (IMDG) : FLAMMABLE LIQUID, N.O.S.  
Proper Shipping Name (ADN) : FLAMMABLE LIQUID, N.O.S.  
Transport document description (ADR) : UN 1993 FLAMMABLE LIQUID, N.O.S., 3, III, (D/E), ENVIRONMENTALLY HAZARDOUS

### 14.3. Packing group

Class (ADR) : 3  
Classification code (ADR) : F1  
Class (IATA) : 3  
Class (IMDG) : 3  
Class (ADN) : 3  
Classification code (ADN) : F1  
Hazard labels (ADR) : 3



Hazard labels (IATA) : 3



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Hazard labels (IMDG) : 3



Hazard labels (ADN) : 3



### 14.4. Packing group

Packing group (ADR) : III  
Packing group (IATA) : III  
Packing group (IMDG) : III  
Packing group (ADN) : III

### 14.5. Environmental hazards

Dangerous for the environment :



Other information : No supplementary information available.

### 14.6. Special precautions for user

#### 14.6.1. Overland transport

Hazard identification number (Kemler No.) : 30  
Classification code (ADR) : F1  
Orange plates :



Special provision (ADR) : 274, 601, 640E  
Transport category (ADR) : 3  
Tunnel restriction code (ADR) : D/E  
Limited quantities (ADR) : 5L  
Excepted quantities (ADR) : E1

#### 14.6.2. Transport by sea

Special provision (IMDG) : 223, 274, 955  
Limited quantities (IMDG) : 5 L  
Excepted quantities (IMDG) : E1  
Packing instructions (IMDG) : P001, LP01  
IBC packing instructions (IMDG) : IBC03  
Tank instructions (IMDG) : T4  
Tank special provisions (IMDG) : TP1, TP29  
EmS-No. (Fire) : F-E  
EmS-No. (Spillage) : S-E  
Stowage category (IMDG) : A

#### 14.6.3. Air transport

CAO packing instructions (IATA) : 366  
CAO max net quantity (IATA) : 220L  
PCA packing instructions (IATA) : 355  
PCA Limited quantities (IATA) : Y344  
PCA limited quantity max net quantity (IATA) : 10L  
PCA max net quantity (IATA) : 60L  
PCA Excepted quantities (IATA) : E1  
Special provision (IATA) : A3  
ERG code (IATA) : 3L



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### 14.6.4. Inland waterway transport

Special provision (ADN)	: 274, 601, 640E
Limited quantities (ADN)	: 5 L
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EX, A
Ventilation (ADN)	: VE01
Number of blue cones/lights (ADN)	: 0
Carriage prohibited (ADN)	: No

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

Contains no substances with Annex XVII restrictions  
Contains no REACH candidate substance  
Contains no REACH Annex XIV substances.

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Data sources	: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
Other information	: None.

PHV SDS EU

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